

Amendments to the Claims

1. (Previously Presented) A cDNA encoding a polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequence shown in SEQ ID NO:12 and (b) the amino acid sequence encoded by a cDNA insert contained within plasmid pCRII-TMSP3 (ATCC Accession No. PTA-3433).
2. (Original) The cDNA of claim 1 which comprises the nucleotide sequence shown in SEQ ID NO:11.
3. (Original) The cDNA of claim 1 which consists of the nucleotide sequence shown in SEQ ID NO:11.
4. (Original) The cDNA of claim 1 which comprises the cDNA insert of plasmid pCRII-TMSP3.
5. (Original) The cDNA of claim 1 which consists of the cDNA insert of plasmid pCRII-TMSP3.
6. (Previously Presented) An expression vector comprising a polynucleotide which encodes a polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequence shown in SEQ ID NO:12 and (b) the amino acid sequence encoded by a cDNA insert contained within plasmid pCRII-TMSP3 (ATCC Accession No. PTA-3433).
7. (Original) The expression vector of claim 6 wherein the polynucleotide comprises the nucleotide sequence shown in SEQ ID NO:11.

8. (Original) The expression vector of claim 6 wherein the polynucleotide consists of the nucleotide sequence shown in SEQ ID NO:11.
9. (Currently Amended) The expression vector of claim 6 wherein the polynucleotide comprises a the coding sequence of the cDNA insert of plasmid pCRII-TMSP3.
10. (Currently Amended) The expression vector of claim 6 wherein the polynucleotide consists of a the coding sequence of the cDNA insert of plasmid pCRII-TMSP3.
11. (Previously Presented) A host cell comprising an expression vector which encodes a polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequence shown in SEQ ID NO:12 and (b) the amino acid sequence encoded by a cDNA insert contained within plasmid pCRII-TMSP3 (ATCC Accession No. PTA-3433).
12. (Original) The host cell of claim 11 wherein the polynucleotide comprises the nucleotide sequence shown in SEQ ID NO:11.
13. (Original) The host cell of claim 11 wherein the polynucleotide consists of the nucleotide sequence shown in SEQ ID NO:11.
14. (Currently Amended) The host cell of claim 11 wherein the polynucleotide comprises a the nucleotide coding sequence of the cDNA insert of plasmid pCRII-TMSP3.
15. (Currently Amended) The host cell of claim 11 wherein the polynucleotide consists of a the nucleotide coding sequence of the cDNA insert of plasmid pCRII-TMSP3.
- 16-21. (Canceled)

22. (Previously Presented) A method of producing a polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequence shown in SEQ ID NO:12 and (b) the amino acid sequence encoded by a cDNA insert contained within plasmid pCRII-TMSP3 (ATCC Accession No. PTA-3433), comprising the steps of:

culturing a host cell comprising an expression vector that encodes the polypeptide under conditions whereby the polypeptide is expressed; and

isolating the polypeptide.

23. (Original) The method of claim 22 wherein the expression vector comprises the nucleotide sequence shown in SEQ ID NO:11.

24. (Currently Amended) The method of claim 22 wherein the expression vector comprises ~~a~~ the coding sequence of the cDNA insert of plasmid pCRII-TMSP3.

25-68. (Canceled)

69. (Currently Amended) An isolated polynucleotide selected from the group consisting of: (a) a polynucleotide encoding a protein that comprises the amino acid sequence of SEQ ID NO:12, (b) a polynucleotide comprising the sequence of SEQ ID NO:11, (c) a polynucleotide comprising ~~a~~ the coding sequence of a cDNA contained within plasmid pCRII-TMSP3 (ATCC Accession No. PTA-3433), and (d) a polynucleotide encoding a protein that comprises the amino acid sequence encoded by the cDNA of plasmid pCRII-TMSP3.

70. (Original) An expression vector comprising the polynucleotide of claim 69.

71. (Original) A host cell comprising the expression vector of claim 70.

72-73. (Canceled)

74. (Currently Amended) A polynucleotide probe selected from the group consisting of:

(a) a first polynucleotide ~~comprising~~ consisting of at least ~~225~~ 300 contiguous nucleotides of the complete complement of the nucleotide sequence shown in SEQ ID NO:11; and

(b) a second polynucleotide that hybridizes under stringent conditions ~~along the full length of at least 225 contiguous nucleotides of~~ to the nucleotide sequence shown in SEQ ID NO:11, wherein the second polynucleotide is at least ~~70%~~ 96% identical in sequence to the ~~at least 225 contiguous nucleotides of the first polynucleotide~~ complete complement of SEQ ID NO:11, wherein the second polynucleotide comprises at least 300 nucleotides, wherein the stringent conditions are selected so that the T_m of a hybrid between ~~(b)~~ the second polynucleotide and the ~~at least 225 contiguous nucleotides of the~~ nucleotide sequence shown in SEQ ID NO:11 is approximately 12-20°C below the T_m of the hybrid calculated according to the formula

$$T_m = 81.5^{\circ}\text{C} - 16.6(\log_{10}[\text{Na}^+]) + 0.41(\%G + C) - 0.63(\%\text{formamide}) - 600/l,$$

where l = the length of the hybrid in basepairs,

wherein use of the polynucleotide probe in a hybridization assay detects a coding sequence for the amino acid sequence shown in SEQ ID NO:12.

75. (Currently Amended) A polynucleotide probe selected from the group consisting of:

(a) a first polynucleotide ~~comprising~~ consisting of at least ~~225~~ 300 contiguous nucleotides of the complete complement of the nucleotide sequence of the cDNA insert of plasmid pCRII-TMSP3 (ATCC Accession No. PTA-3433); and

(b) a second polynucleotide that hybridizes under stringent conditions ~~along the full length of at least 225 contiguous nucleotides of~~ to the nucleotide sequence of the cDNA insert of plasmid pCRII-TMSP3, wherein the second polynucleotide is at least ~~70%~~ 96% identical in sequence to the ~~at least 225 contiguous nucleotides of the first polynucleotide complete complement of the nucleotide sequence of the cDNA insert of plasmid pCRII-TMSP3, wherein the second polynucleotide comprises at least 300 nucleotides,~~ wherein the stringent conditions are selected so that the T_m of a hybrid between (b) the second polynucleotide and the ~~at least 225 contiguous nucleotides of the~~ nucleotide sequence of the cDNA insert of plasmid pCRII-TMSP3 is approximately 12-20°C below the T_m of the hybrid calculated according to the formula

$$T_m = 81.5^{\circ}\text{C} - 16.6(\log_{10}[\text{Na}^+]) + 0.41(\%G + C) - 0.63(\%\text{formamide}) - 600/l,$$

where l = the length of the hybrid in basepairs,

wherein use of the polynucleotide probe in a hybridization assay detects a coding sequence for a polypeptide encoded by the cDNA insert of plasmid pCRII-TMSP3.

76. (Currently Amended) The polynucleotide probe of claim ~~74~~ 84 wherein the ~~second polynucleotide probe~~ and the ~~at least 225 contiguous nucleotides of the first polynucleotide complete complement of SEQ ID NO:11~~ are at least 75% identical in sequence.

77. (Currently Amended) The polynucleotide probe of claim ~~74~~ 84 wherein the ~~second polynucleotide probe~~ and the ~~at least 225 contiguous nucleotides of the first polynucleotide complete complement of SEQ ID NO:11~~ are at least 90% identical in sequence.

78. (Canceled)

79. (Currently Amended) The polynucleotide probe of claim 74 wherein the second polynucleotide and the ~~at least 225 contiguous nucleotides of the first polynucleotide~~ complete complement of SEQ ID NO:11 are at least 98% identical in sequence.

80. (Currently Amended) The polynucleotide probe of claim ~~75~~ 85 wherein the ~~second~~ polynucleotide probe and the ~~at least 225 contiguous nucleotides of the first polynucleotide~~ complete complement of the nucleotide sequence of the cDNA insert of plasmid pCRII-TMSP3 are at least 75% identical in sequence.

81. (Currently Amended) The polynucleotide probe of claim ~~75~~ 85 wherein the ~~second~~ polynucleotide probe and the ~~at least 225 contiguous nucleotides of the first polynucleotide~~ complete complement of the nucleotide sequence of the cDNA insert of plasmid pCRII-TMSP3 are at least 90% identical in sequence.

82. (Canceled)

83. (Currently Amended) The polynucleotide probe of claim 75 wherein the second polynucleotide and the ~~at least 225 contiguous nucleotides of the first polynucleotide~~ complete complement of the cDNA insert of plasmid pCRII-TMSP3 are at least 98% identical in sequence.

84. (New) A polynucleotide probe that hybridizes under stringent conditions to the nucleotide sequence shown in SEQ ID NO:11, wherein the polynucleotide probe is at least 70% identical in sequence to the complete complement of SEQ ID NO:11, wherein the probe comprises at least 450 nucleotides, wherein the stringent conditions are selected so that the T_m of a hybrid between

the probe and the nucleotide sequence shown in SEQ ID NO:11 is approximately 12-20°C below the T_m of the hybrid calculated according to the formula

$$T_m = 81.5^{\circ}\text{C} - 16.6(\log_{10}[\text{Na}^+]) + 0.41(\%G + C) - 0.63(\%\text{formamide}) - 600/l,$$

where l = the length of the hybrid in basepairs,

wherein use of the probe in a hybridization assay detects a coding sequence for the amino acid sequence shown in SEQ ID NO:12.

85. (New) A polynucleotide probe that hybridizes under stringent conditions to the nucleotide sequence of the cDNA insert of plasmid pCRII-TMSP3, wherein the polynucleotide probe is at least 70% identical in sequence to the complete complement of the nucleotide sequence of the cDNA insert of plasmid pCRII-TMSP3, wherein the comprises at least 450 nucleotides, wherein the stringent conditions are selected so that the T_m of a hybrid between the probe and the nucleotide sequence of the cDNA insert of plasmid pCRII-TMSP3 is approximately 12-20°C below the T_m of the hybrid calculated according to the formula

$$T_m = 81.5^{\circ}\text{C} - 16.6(\log_{10}[\text{Na}^+]) + 0.41(\%G + C) - 0.63(\%\text{formamide}) - 600/l,$$

where l = the length of the hybrid in basepairs,

wherein use of the probe in a hybridization assay detects a coding sequence for a polypeptide encoded by the cDNA insert of plasmid pCRII-TMSP3.